

Oroville Facilities Relicensing Plenary Group Meeting Operations Modeling Update

September 24, 2002

- **Statewide Modeling (CALSIM II)**
 - **Monthly time step planning model**
 - **Status of development:**
 - ✓ Currently reviewing existing conditions assumptions that have been developed by DWR.
 - ✓ Collecting future conditions benchmark studies.
 - **Schedule:** Complete existing conditions scenario study by end of January '03
 - **Uses for model output**
 - ✓ Compare alternatives to base condition scenarios
 - ✓ Develop target conditions for lower order modeling efforts
 - **Examples**
 - ✓ Water supply
 - ✓ Lake Oroville storage/elevation conditions
 - ✓ Cumulative impact analysis

- **Local Operations Modeling**
 - **Daily/hourly time step**
 - **Status of development:** Modeling consultants have completed review of modeling options. DWR completed task order to acquire and implement HYDROPS (Powell Technologies) for local operations.
 - **Schedule:** Complete development by end of March '03
 - **Uses for model output:** Compare alternatives to base condition scenarios
 - ✓ Thermalito Complex storage/elevation conditions
 - ✓ Power generation
 - ✓ Reservoir and river release conditions for temperature modeling
 - ✓ Analyses of operational scenarios
 - **What are the options for performing modeling if analysis is needed before model development is completed?**
 - ✓ Develop spreadsheets to assist with analysis of existing data
 - ✓ Perform modeling with COLOSSUS – use would be limited to short-term analysis or specific event conditions.

- **Temperature Modeling**
 - **Daily/hourly time step**
 - **Status of Development:** Modeling consultants completed review of modeling requirements and options. Recommendation is to use WQRRS in a one-D mode. DWR finalizing task order to complete implementation of temperature model development.
 - **Schedule:** Complete development by end of June '03
 - **Uses for model output:** Compare alternatives to base condition scenarios
 - ✓ Temperature conditions at specified locations along the river
 - ✓ Temperature of diversions from afterbay
 - ✓ Temperature of releases to the Feather River
 - **What if analysis is needed before model development is completed?**
 - ✓ Use existing monthly time step temperature model developed by U.S. Bureau of Reclamation.
 - ✓ Complete implementation of RMA 10 river model developed by UC Davis.

- **Stage/Flow Modeling**
 - **Hourly time step**
 - **Status of Development:**
 - ✓ Completed review of alternatives.
 - ✓ DWR reviewed recommendations by Modeling Consultants and completed a task order to implement HECRAS.
 - **Schedule:** The model would be completed by end of March '03
 - **Uses of model output:**
 - ✓ Compare alternatives to base condition scenarios
 - ✓ Provide hydrodynamic conditions for temperature modeling and scour modeling